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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,667	06/19/2001	Andre Luiz Arias	33764R003	7582
441	7590	12/31/2003	EXAMINER	
SMITH, GAMBRELL & RUSSELL, LLP 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			THORNTON, YVETTE C	
			ART UNIT	PAPER NUMBER
			1752	
DATE MAILED: 12/31/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/787,667	ARIAS ET AL. 
	<b>Examiner</b>	<b>Art Unit</b>
	Yvette C. Thornton	1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 October 2003.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 19-39 is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

This is written in reference to application number 09787667 filed on June 19, 2001, which is a 371 of PCT/BR99/00079 filed on September 21, 1999.

### *Response to Amendment*

1. Claims 1-39 are currently pending. Claims 23-39 are newly added.
2. The amendments to the specification and the claims are sufficient to overcome the objections set forth in the previous office action.
3. The amendment to claim 15 is sufficient to overcome the claims rejection set forth under 35 USC 101 and 112, 2<sup>nd</sup> paragraph.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

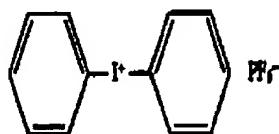
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

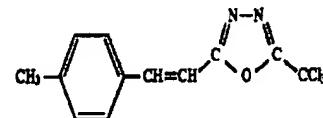
5. Claims 1-2, 4-12, 15-18 and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuchiya et al. (US 5786125 A). Tsuchiya exemplifies in examples 1-5 the preparation of a positive light sensitive lithographic printing plate. The substrate is an aluminum plate, which has been textured and anodized (c. 22, l. 65-c. 23, l. 7). The said

plate is coated with a coating solution and dried to form a primer layer (c. 23, l. 8-11). A light sensitive layer is then coated on the primer layer and dried to a weight of 2 g/m<sup>2</sup>. The light sensitive layer comprises (1) a carbon black dispersion; (2) bisphenol A-formaldehyde resol resin; (3) m-cresol-formaldehyde novolak resin; (4) an acid precursor; (5) a surfactant and (6) a solvent (c. 23, l. 26-c. 24, l 20). Example 1 exemplifies the use of an acid precursor

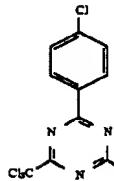


(III-2) having the structure

(c. 8, l. 55; Table 1). Examples 3 and 5



used acid precursor (I-2) and (II-2) which have the structures:



respectively. It is the examiner's position that the use of bisphenol A-formaldehyde resol resin and m-cresol-formaldehyde novolak resin meets the limitations of the claimed dual polymer binder system wherein bisphenol A-formaldehyde resol resin is the second polymer which is the product of bisphenol A and an aldehyde and m-cresol-formaldehyde novolak resin is the first polymer which is the product of m-cresol and an aldehyde. It is the examiner's position that compound (III-2) meets the limitations of the claimed iodonium salt having a hexafluorophosphate anion. Specifically, compound (III-2) is diphenyliodonium hexafluorophosphate as set forth in instant claim 9. Compounds (I-2) and

(II-2) meet the limitations of a dye derived from the oxazolyl class as set forth in instant claim 5.

Example 1 further teaches applying a silicon rubber layer over the said light sensitive layer and laminating with a stretched polypropylene film to obtain a light sensitive lithographic printing plate. The resulting plate was exposed with a YAG laser; the laminated film was pressed off; the plate was heated and then developed.

6. Claims 1-4, 6-7, 10-13, 15-18 and 20-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi (US 6042987 A). Kobayashi teaches a negative type image recording material, which is capable of effecting direct plate making. Examples 6-8 exemplify three kinds of solutions [D-1] to [D-3] which differed in the kind of organic base. These solutions were coated on aluminum plates, which was textured and anodized (c. 55, l. 54-66). The weight of each coating was 1.8 g/m<sup>2</sup> (c. 58, l. 1-10). The said solutions comprise diphenyliodonium trifluoromethanesulfonate as the acid generating compound; infrared absorbing agent NK-2014 which is a cyanine dye; novolak resin obtained from cresol and formaldehyde having a molecular weight of 5800; a resol resin obtained from bisphenol A and formaldehyde having a molecular weight of 1600; an organic base from Table 3; a surfactant and two solvents. The coated plates were exposed to IR rays, treated by heating at 120°C, developed and rinsed (c. 58, l. 11-60). It is the examiner's position that the taught resol resin meets the limitations of the claimed second polymer (polyhydric) and the taught novolak meets the limitation of the claimed first polymer (polyphenolic). The said solutions comprise approximately 6% acid generator; 4% infrared absorbing compound; 45% novolak;

41 % resol, based on solid components all which fall within the range of the write the image mode of instant claim 13.

Examples 16-18 exemplify three kinds of solutions [I-1] to [I-3] which differed in the kind of amino acid compound. These solutions were coated on aluminum plates, which was textured and anodized (c. 60, l. 40-54). The weight of each coating was 1.8 g/m<sup>2</sup> (c. 62, l. 45-55). The said solutions comprise diphenyliodonium trifluoromethanesulfonate as the acid generating compound; infrared absorbing agent NK-2014 which is a cyanine dye; novolak resin obtained from cresol and formaldehyde having a molecular weight of 5800; a resol resin obtained from bisphenol A and formaldehyde having a molecular weight of 1600; an amino acid from Table 8; a surfactant and two solvents. The coated plates were exposed to IR rays, treated by heating at 120°C, developed and rinsed (c. 63, l. 25-44). It is the examiner's position that the taught resol resin meets the limitations of the claimed second polymer (polyhydric); the taught novolak meets the limitation of the claimed first polymer (polyphenolic); and the amino acid meets the limitation of a stabilizing acid. Specifically nicotinic acid is an aromatic carboxylic acid as set forth in instant claims 10-11. The said solutions comprise approximately 6% acid generator; 4% infrared absorbing compound; 46% novolak; 41 % resol; and 0.3% acid based on solid components all which fall within the range of the write the image mode of instant claim 13.

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 13-14 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya et al. (US 5786125 A) as applied to claims 1-2, 4, 6-12, 15-18 and 20-22 above. Tsuchiya as discussed above, teaches all the limitations of the claims except Tsuchiya lacks explicit details pertaining to the molecular weight of the taught resol and novolak resins. However since the resins fall within the scope of the claimed polymers one of ordinary skill in the art would expect that the molecular weights would fall within the broad range of instant claim 3.

Tsuchiya also fails to teach a composition comprising the specific composition of instant claims 13 and 14. Tsuchiya however does teach that the weight ratio of the resol resin to the novolak resin used is 10/90 to 95/5 (c. 3, l. 23-24). The infrared absorber can be added in an amount of 0.01 to 50% by weight and preferably 0.1-20% by weight based on the total solid content of the light sensitive layer composition (c. 3, l. 55-58). The acid precursors are added in the amount of 0.001 to 40% by weight, preferably 0.1 to 20% by weight (c. 17, l. 16-22). The taught ranges clearly encompass those claimed by the applicant. Although Tsuchiya fails to exemplify a composition within the claimed ranges, one of ordinary skill in the art would have motivated by the teaching of Tsuchiya to use any amount within the taught range to make a light sensitive composition which requires no fountain solution for direct plate making (c. 1, l. 5-12).

9. Claims 8, 14 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US 6042987 A) as applied to claims 1-4, 6-7, 10-13, 15-18 and 20-22

above. Kobayashi as discussed above teaches all the limitation of the instant claims except it failed to exemplify the use of an anion as set forth in instant claim 8. Kobayashi does teach that examples of particularly preferred counter anions of the taught onium salts include methanesulfonate (1), mesitylenesulfonate (21), etc. (c. 24, l. 34-c. 25, l. 27). One of ordinary skill in the art would have been motivated to substitute any of the particularly preferred anions for the exemplified trifluoromethanesulfonate anion of the examples and expect reasonably similar results.

Kobayashi also failed to exemplify a composition as set forth in instant claim 14. Kobayashi does however teach that the resol resin is used in the amount of 5-80% by weight, preferably 10-70%, particularly preferably 15-65% of the total solid components. When the amount of the resol resin is less than 5% by weight, a negative image is not formed. The amount exceeding 80% by weight is not preferable from the viewpoint of stability during storage (c. 42, l. 22-32). The said resol resin used in the present invention preferably has a molecular weight of 300-6000. When the average weight exceeds 6000, it becomes easy to cause staining in non-image parts (c. 42, l. 22-25). The alkali soluble resin (i.e., novolak) is used in the particularly preferable amount of 20-90% by weight. When the amount is less than 5% by weight, durability of the recording layer is deteriorated and when the amount exceeds 95% no image is formed (c. 48, l. 63-49, l. 5). The novolak resins have preferably a weight average weight molecular weight of 800-200,000 and a number average molecular weight of 400-60,000 (c. 42, l. 52-54). One of ordinary skill in the art would have been motivated by the teachings of Kobayashi to use any amount within the particularly preferred range to make an image recording material which has improved storage stability and durability.

*Allowable Subject Matter*

10. Claims 19 and 27-39 are allowed.
11. The following is a statement of reasons for allowance: review of the prior art failed to teach and/or suggest a curing step after development as set forth in instant claim 19. One of ordinary skill in the art would not have been motivated nor would it have been obvious to include a curing step after development in any of the prior art teaching of Tsuchiya or Kobayashi.

*Response to Arguments*

12. Applicant's arguments filed October 3, 2003 have been fully considered but they are not persuasive.

Rejection under 35 USC 102(b) over Tsuchiya

13. Applicants argue that Tsuchiya does not anticipate the claimed invention because the claimed invention pertains to a second polymer, which is much broader than the taught resoles. The claimed second polymer covers polyhydric aromatic compounds independent of the methods using to produce them, i.e., acid condensation versus base condensation. Applicants further argue that Tsuchiya fails to recognize the utility of the broader group of additional polyhydric compounds. The instant claims discloses a second polymer comprised of the condensation product selected from a Markush group comprising catechol, resorcinol, hydroquinone, bisphenol A, bisphenol B, trihydroxybenzene or other di- or polyhydric aromatic compounds and methylolated analogs thereof with an aliphatic or aromatic aldehyde. Tsuchiya clearly teaches a light sensitive layer comprises (1) a carbon black dispersion; (2) bisphenol A-formaldehyde resol resin; (3) m-cresol-formaldehyde novolak

resin; (4) an acid precursor; (5) a surfactant and (6) a solvent (c. 23, l. 26-c. 24, l 20). It is the examiner's position that the use of bisphenol A-formaldehyde resol resin and m-cresol-formaldehyde novolak resin meets the limitations of the claimed dual polymer binder system wherein bisphenol A-formaldehyde resol resin is the second polymer which is the product of bisphenol A and an aldehyde and m-cresol-formaldehyde novolak resin is the first polymer which is the product of m-cresol and an aldehyde. Although the claims are broader than the taught invention, Tsuchiya clearly teaches the use of bisphenol A in combination with formaldehyde which clearly anticipates the claim limitations of the said second polymer as set forth in instant claim 1. Furthermore, Tsuchiya also teaches that resorcinol may be used as a suitable phenol compound (c. 2, l. 54-c. 3, l. 5). Resorcinol is also disclosed in the Markush group of instant claim 1.

The claims are written as a product-by-process claim, which recites method limitations that do not further define the material. Therefore, any method may be used to make the material (i.e., acid condensation or base condensation). Consequently, the burden shifts to Applicant to provide evidence of an unobvious difference between the claimed product and the prior art. Furthermore, "The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 180 USPQ 324,326 (CCPA 1974), see MPEP 2113.

Applicants further argue that Tsuchiya teaches the use of two coatings to produce a two layer lithographic plate, while the present invention uses a single coating system for conventional lithographic printing. The examiner is of the position that the comprising

language of the instant claims does not prohibit the use of additional coatings as disclosed by Tsuchiya. Tsuchiya, as discussed above, clearly teaches the use of a coating prepared from a composition comprising (1) a carbon black dispersion; (2) bisphenol A-formaldehyde resol resin; (3) m-cresol-formaldehyde novolak resin; (4) an acid precursor; (5) a surfactant and (6) a solvent (c. 23, l. 26-c. 24, 120).

**Rejection under 35 USC 102(e) over Kobayashi**

14. Applicants argue that the prior art reference of Kobayashi also fails to anticipate the claimed invention because it requires the presence of an amino acid or derivative thereof, whereas the claimed invention does not. Applicants further argue that the prior art requires an acid compound be used to stabilize the coating composition therein. The examiner is of the position that the instant claims, as written, allows for an *optional* component of a stabilizing acid. Examples 6-8 of Kobayashi exemplify three kinds of solutions [D-1] to [D-3] which differed in the kind of organic base. The “comprising” language of the instant claims does not prohibit the presence of an organic base. Furthermore, the “optional” language of the instant claims, do not require the presence of a stabilizing acid. Examples 16-18 of Kobayashi exemplify three kinds of solutions [I-1] to [I-3] which differed in the kind of amino acid compound (c. 60, l. 40-54). It is the examiner’s position that the taught amino acid meets the limitation of the claimed stabilizing acid. Specifically nicotinic acid is an aromatic carboxylic acid as set forth in instant claims 10-11.

Applicants also argue that the resol resin disclosed by Kobayashi does not meet the limitations of the claimed second polymer. Although the claims are broader than the taught invention, Kobayashi clearly teaches the use of bisphenol A in combination with

formaldehyde which anticipates the claim limitations of the said second polymer as set forth in instant claim 1. Furthermore, Kobayashi also teaches that resorcinol and tris(4-hydroxyphenyl)methane may be used as a suitable phenol compounds (c. 41, l. 59-64). Resorcinol is disclosed in the Markush group of instant claim 1 and tris(4-hydroxyphenyl)methane is clearly a polyhydroxy aromatic compound as disclosed in the said Markush group. The claims are written as product-by-process claims, which recites method limitations that do not further define the material. Therefore, any method may be used to make the material (i.e., acid condensation or base condensation). Consequently, the burden shifts to Applicant to provide evidence of an unobvious difference between the claimed product and the prior art. Furthermore, "The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 180 USPQ 324,326 (CCPA 1974), see MPEP 2113.

**Rejection under 35 USC 103(a) over Tsuchiya**

15. In regard to the 103(a) rejection over Tsuchiya, applicants argue that because Tsuchiya does not teach the features of claim 1, the references would not have made it obvious to use the limitations set forth in claims 3, 13-14 and 24-26. The examiner maintains the position that the prior art clearly anticipates the claimed invention for the reasons discussed above in paragraph 13, and one of ordinary skill in the art would have motivated by the teaching of Tsuchiya to use any amount within the taught ranges to make a light sensitive composition which requires no fountain solution for direct plate making (c. 1, l. 5-12).

**Rejection under 35 USC 103(a) over Kobayashi**

16. In regard to the 103(a) rejection of the claims over Kobayashi, applicants argue that because Kobayashi does not teach the features of claim 1, it does not render obvious the limitations of claims 8 and 14. The examiner maintains the position that the prior art clearly anticipates the claimed invention for the reasons discussed above in paragraph 14. The examiner also maintains that one of ordinary skill in the art would have been motivated to substitute any of the particularly preferred anions of Kobayashi for the exemplified trifluoromethanesulfonate anion of the examples and expect reasonably similar results. Further, one of ordinary skill in the art would have been motivated by the teachings of Kobayashi to use any amount within the particularly preferred ranges to make an image recording material which has improved storage stability and durability.

17. The examiner hereby maintains the rejections of record.

***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

19. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.

In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 703-305-0589. The examiner can normally be reached on Monday-Thursday 8-6:30.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 703-308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

22. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1495.



Yvette Clarke Thornton  
Patent Examiner  
Art Unit 1752

yct  
December 19, 2003